Amendments to the Claims

1-11. (Canceled)

12. (Currently Amended) An apparatus for use in collecting airborne particles comprising:

a collection vessel in which airborne particles are collected for analysis, the collection vessel comprising a microcentrifuge tube having an open end that is orthogonal to a line extending longitudinally with respect to the tube;

an air-inlet conduit for conducting air into the ~~collection vessel~~ microcentrifuge tube, the air-inlet conduit extending at an angle with respect to a plane that is parallel to the open end, the air-inlet conduit being non-orthogonal and non-parallel to said plane; and

an air-outlet conduit for conducting air out of the ~~collection vessel~~ microcentrifuge tube;

wherein the air-inlet conduit and the air-outlet conduit are situated to cause air flowing through the ~~collection vessel~~ microcentrifuge tube to create a vortex, thereby causing airborne particles to separate from the air flowing through the ~~collection vessel~~ microcentrifuge tube.

13. (Currently Amended) The apparatus of claim 12 wherein:

the ~~collection vessel~~ microcentrifuge tube is a first ~~collection vessel~~ microcentrifuge tube, the air-inlet conduit comprises a first air-inlet conduit, and the air-outlet conduit comprises a first air-outlet conduit; and

the apparatus further comprises:

a second ~~collection vessel~~ microcentrifuge tube;

a second air-inlet conduit in fluid communication with the first air-outlet conduit so that air flowing through the first air-outlet conduit is conducted into the second ~~collection vessel~~ microcentrifuge tube through the second air-inlet conduit, the second air-inlet conduit being non-orthogonal to a line extending longitudinally with respect to the second ~~collection vessel~~ microcentrifuge tube; and

a second air-outlet conduit for conducting air out of the second ~~collection vessel~~ microcentrifuge tube;

wherein the second air-inlet conduit and the second air-outlet conduit are situated to cause air flowing through the second ~~collection vessel~~ microcentrifuge tube to create a vortex, thereby causing airborne particles to separate from the air flowing through the second ~~collection vessel~~ microcentrifuge tube.

14. (Currently Amended) The apparatus of claim 13, wherein the first ~~collection vessel~~ microcentrifuge tube is supported in the same orientation as the second ~~collection vessel~~ microcentrifuge tube.

15. (Currently Amended) The apparatus of claim 12, further comprising a vacuum source fluidly connectable to the air-outlet conduit to draw air through the ~~collection vessel~~ microcentrifuge tube.

16. (Currently Amended) The apparatus of claim 12, wherein:

~~the collection vessel has an open end~~ the open end of the microcentrifuge tube is the only opening in the tube;

the air-inlet conduit conducts air to flow into the ~~collection vessel~~ microcentrifuge tube through the open end; and

the air-outlet conduit conducts air to flow outwardly from the ~~collection vessel~~ microcentrifuge tube through the open end.

17. (Currently Amended) The apparatus of claim 12, further comprising an air-flow member adapted to be removably coupled the ~~collection vessel~~ microcentrifuge tube, wherein the air-inlet conduit comprises a first passageway ~~and the air-outlet conduit are passageways~~ defined in the air-flow member and the air-outlet conduit comprises a second passageway defined in the air-flow member.

18. (Currently Amended) The apparatus of claim 17, wherein the air-outlet conduit comprises an extension portion of the air-flow member that is in communication with the second passageway and extends into the ~~collection vessel~~ microcentrifuge tube through ~~an~~ the open end thereof.

19. (Currently Amended) The apparatus of claim 13, further comprising an air-flow member adapted to be removably coupled the first and second ~~collection vessels~~ microcentrifuge tubes, wherein the first and second air-inlet conduits and the first and second air-outlet conduits are respective passageways defined in the air-flow member.

20. (Currently Amended) The apparatus of claim 12, wherein the air flow in the ~~collection vessel~~ microcentrifuge tube is a reverse-flow cyclone.

21. (Original) The apparatus of claim 12 having a 50% cut-off diameter of 2 microns.

22-33. (Canceled)

34. (Previously Presented) A method for collecting airborne particles for analysis, the method comprising:

flowing air through the open end of a microcentrifuge tube along a flow path in a direction that extends generally tangentially with respect to an inner surface of the microcentrifuge tube, the open end being orthogonal to a line extending longitudinally with respect to the tube, the flow path being non-orthogonal and non-parallel to a plane defined by the open end, wherein the air flowing through the microcentrifuge tube establishes a cyclone; and

separating airborne particles from the air flowing through the microcentrifuge tube.

35. (Previously Presented) The method of claim 34, wherein the air flowing through the microcentrifuge tube establishes a reverse-flow cyclone.

36. (Previously Presented) The method of claim 34, wherein the air flowing into the microcentrifuge tube is conducted through an inlet conduit of an air-flow fitting coupled to the microcentrifuge tube, and wherein air flowing out of the microcentrifuge tube is conducted through an outlet conduit of the air-flow fitting.

37. (Previously Presented) The method of claim 34, wherein air flowing outwardly from the microcentrifuge tube is conducted into a secondary collection vessel to further separate airborne particles from the air flow.

38-39. (Canceled)

40. (New) The method of claim 34, further comprising performing an analysis of the particles separated from the air while the particles are still in the microcentrifuge tube.

41. (New) The method of claim 40, wherein performing an analysis of the particles comprises performing PCR on the particles while the particles are still in the collection vessel.

42. (New) The method of claim 40, wherein performing an analysis of the particles comprises detecting for the presence of a specific type of particle while the particles are still in the collection vessel.

43. (New) The method of claim 42, wherein the presence of a specific type of particle is detected by an assay that is contained in the collection vessel as air flows through the collection vessel and particles are separated from the air.

44. (New) An apparatus for use in collecting airborne particles comprising:

a collection vessel in which airborne particles are collected for analysis, the collection vessel comprising a microcentrifuge tube having an open end that is orthogonal to a line extending longitudinally with respect to the tube; and

an air-flow member configured to be coupled to the microcentrifuge tube, the air-flow member comprising an air-inlet conduit adapted to direct air through the open end and into the microcentrifuge tube and an air-outlet conduit adapted to receive air flowing outwardly through the open end of the microcentrifuge tube, the air-inlet conduit extending at an angle with respect to a plane that is parallel to the open end, the air-inlet conduit being non-orthogonal and non-parallel to said plane, wherein the air-inlet conduit and the air-outlet conduit are situated to cause

air flowing through the collection vessel to create a vortex, thereby causing airborne particles to separate from the air flowing through the collection vessel.

45. (New) The apparatus of claim 44, wherein the open end of the microcentrifuge tube is the only opening in the microcentrifuge tube.

46. (New) The apparatus of claim 44, further comprising a vacuum source fluidly connectable to the air-outlet conduit to draw air through the collection vessel.

47. (New) The apparatus of claim 44 having a 50% cut-off diameter of 2 microns.

48. (New) The apparatus of claim 44, wherein the microcentrifuge tube comprises a first microcentrifuge tube, the apparatus further comprises a second microcentrifuge tube having an open end, the air-inlet conduit comprises a first air-inlet conduit adapted to direct air through the open end of the first microcentrifuge tube and into the first microcentrifuge tube, the air-outlet conduit comprises a first air-outlet conduit adapted to receive air flowing outwardly through the open end of the first microcentrifuge tube, and the air-flow member further comprises an intermediate fluid conduit, a second air-inlet conduit adapted to direct air from the first microcentrifuge tube to flow into the second microcentrifuge tube via the open end thereof, and a second air-outlet conduit adapted to receive air flowing outwardly through the open end of the second microcentrifuge tube, the intermediate fluid conduit being in fluid communication with the first air-outlet conduit and the second air-inlet conduit such that air from the first microcentrifuge tube flows through first air-outlet conduit, the intermediate conduit, the second air-inlet conduit and into the second microcentrifuge tube, the second air-inlet conduit and the second air-outlet conduit being situated to cause air flowing through the second microcentrifuge tube to create a vortex, thereby causing airborne particles to separate from the air flowing through the second microcentrifuge tube.

49. (New) The apparatus of claim 44, wherein the first microcentrifuge tube is supported side-by-side in the same orientation as the second microcentrifuge tube.

50. (New) The apparatus of claim 44, wherein the air-flow member is configured to support both the first and second collection vessels in a generally vertically upright orientation during use.

51. (New) The apparatus of claim 44, wherein the particles deposited in the first microcentrifuge tube are generally larger than the particles deposited in the second microcentrifuge tube.

52. (New) The apparatus of claim 44, wherein the air-inlet conduit extends at an angle of about 30° to 45° with respect to the plane.

53. (New) The apparatus of claim 44, wherein the air-outlet conduit is parallel to a longitudinal axis of the microcentrifuge tube.

54. (New) The apparatus of claim 44, wherein the air-flow member is threaded to receive corresponding threads on the microcentrifuge tube so that the microcentrifuge tube can be easily screwed onto and removed from the air-flow member.